AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~. Please add claims 6-13.

1 (original): A method for producing a helical synchronous belt for driving carriage, wherein said helical synchronous belt comprises a back layer, teeth and core cords which are made of a synthetic resin, said method comprising the steps of:

measuring a thrust force exerted on the helical synchronous belt due to a twist angle of the core cord using a strain gauge provided on a driving pulley; and

determining a helical tooth angle and core cord twist angle based on the measured thrust force.

2 (original): A helical synchronous belt having its core cords twisted at an angle opposing to the angle of helical teeth, with the helical tooth angle set to 5° to 15° and core cord twist angle set to 15° to 2°.

3 (original): The helical synchronous belt as described in Claim 2, which has a helical tooth angle of 10°, 7° or 5° and core cord twist angle of 10.2° or 4.8°.

4 (currently amended): The helical synchronous belt as described in Claim 2 ~~or 3~~, comprising its back layer and teeth made of urethane resin and its core cords made of aramid fiber or glass fiber.

5 (currently amended): The helical synchronous belt as described in ~~any one of~~ Claims 2 ~~to~~ 4, which is used for driving carriage.

6 (new): The helical synchronous belt as described in Claim 3, comprising its back layer and teeth made of urethane resin and its core cords made of aramid fiber or glass fiber.

7 (new): The helical synchronous belt as described in Claim 3, which is used for driving carriage.

8 (new): The helical synchronous belt as described in Claim 4, which is used for driving carriage.

9 (new): The helical synchronous belt as described in Claim 6, which is used for driving carriage.

10 (new): A helical synchronous belt comprising:

a back layer;

helical teeth configured to mesh with a pulley and arranged at a helical tooth angle which is formed by a tooth inclination line of each helical tooth and a line perpendicular to a longitudinal direction of the belt; and

core cords embedded between the back layer and the teeth and aligned in the longitudinal direction of the belt for reinforcing the belt, said core cords being twisted at a twist angle which is formed by a twist inclination line of each core cord and a line parallel to a longitudinal direction of the core cords,

wherein a direction of the tooth inclination line and a direction of the twist inclination line are opposite to each other with respect to the line perpendicular to the longitudinal direction of the belt, and the helical tooth angle and the twist angle are set at 5° to 15° and 2° to 15°, respectively.

11 (new): The helical synchronous belt as described in Claim 10, wherein the helical tooth angle is set at 5°, 7°, or 10° and the core cord twist angle is set at 4.8° or 10.2°.

12 (new): The helical synchronous belt as described in Claim 10, wherein the back layer and the helical teeth are made of urethane resin, and the core cords are made of aramid fiber or glass fiber.

13 (new): The helical synchronous belt as described in Claim 10, which comprises no canvas formed on the helical teeth.